

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A multi component chlorine dioxide producing sanitizing and disinfecting composition comprising:
 - a. a chlorite;
 - b. an activator;
 - c. a secondary active component; and
 - d. a solvent.
2. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 1 wherein the secondary active component has antimicrobial characteristics.
3. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 1 wherein the solvent is water.
4. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 1 wherein the secondary active component is an anionic surfactant, an acid anionic, quaternary ammonium compound, a halogen based compound or an antimicrobial.
5. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition comprising: a. a chlorite; b. an activator; c. a chloride salt; and d. a solvent.
6. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 where in the solvent is water.
7. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 including a diluent.
8. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the diluent is water.
9. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the activator is an acid.

10. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the activator is phosphoric acid.
11. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the chlorite is an alkali metal chlorite.
12. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the chlorite is sodium chlorite.
13. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the chloride is an alkali metal chloride.
14. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the chloride is sodium chloride.
15. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the components are in amounts to produce an effective quantity of chlorine dioxide in less than five minutes.
16. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the chloride is less than 3500 ppm.
17. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the chlorite is less than 100 ppm.
18. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the activator is less than 5250 ppm.
19. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the molar ratio of the chloride to chlorite is at least 20 to 1.
20. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 including a surfactant in effective amounts to clean a surface or system.

21. (Withdrawn) The multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 20 wherein the surfactant has biocidal attributes.
22. (Withdrawn) A method of producing chlorine dioxide with a multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 7 wherein the chlorite, the activator and a chloride are stored separately and mixed immediately before use to produce a chlorine dioxide in effective amounts in less than 5 minutes.
23. (Withdrawn) A method of producing chlorine dioxide with a multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 5 wherein the chlorite, the activator and the chloride salt are stored in at least two separate areas and passes through metering tips to an eductor wherein the separate components and a diluent stream are combined to form a predetermined concentration to be applied to a surface or system.
24. (Currently Amended) A multi component chlorine dioxide producing sanitizing and disinfecting system composition comprising a first component and a second component:
the first component comprising a. a chlorite present in an amount less than 300 ppm (w/w of solution) and a first solvent; and
the second component comprising b. an activator present in an amount sufficient to reduce pH to 5 or lower, ; c. a reducing agent present in an amount less than 50 ppm (w/w of solution). [.] and d. a second solvent [.],
wherein upon combining the first component and the second component, more than 1 ppm (w/w of solution) of chlorine dioxide forms within five minutes.
25. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 wherein the first or second solvent is water.
26. – 27. (Canceled)
28. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 wherein the activator is an acid.

29. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 wherein the activator is phosphoric acid.
30. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 wherein the chlorite is an alkali metal chlorite.
31. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 wherein the chlorite is sodium chlorite.
32. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24_26 wherein the reducing agent is also antimicrobial in nature.
33. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 32 wherein the reducing agent is an iodide salt.
34. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 33 including a stabilizing agent.
35. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 34 wherein the stabilizing agent is ascorbic acid.
36. – 38. (Canceled)
39. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24_26 wherein the pH of the second component solution is below 3.
40. - 42. (Canceled)
43. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24_26 wherein the molar ratio of the chlorite to reducing agent is less than 50 to 1.

44. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 43 wherein the molar ratio of the chlorite to reducing agent is less than 25 to 1.

45. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 26 including a surfactant in effective amounts to sanitize and clean a surface or system simultaneously.

46. (Currently Amended) The multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 26 including a surfactant with biocidal attributes in effective amounts to sanitize and clean a surface or system simultaneously.

47. (Withdrawn) A method of producing chlorine dioxide with a multi component chlorine dioxide producing sanitizing and disinfecting system composition of claim 24 26 wherein the first component and the second component the chlorite, the activator and the reducing agent are stored separately and mixed immediately before use to produce a chlorine dioxide in effective amounts in less than 5 minutes.

48. (Withdrawn) A method of producing chlorine dioxide with a multi component chlorine dioxide producing sanitizing and disinfecting composition of claim 24 26 wherein the chlorite, the activator and the reducing agent are stored in at least two separate areas and passes through an eductor wherein the separate components and a diluent stream are combined through at least one metering tip to form a predetermined concentration to be applied to a surface or system.

49. – 70. (Canceled)

71. (New) A multi component chlorine dioxide producing sanitizing and disinfecting system comprising a first component, a second component, and a third component,
the first component comprising a chlorite present in an amount less than 300 ppm (w/w of solution) and a first solvent;
the second component comprising an activator present in an amount sufficient to reduce pH to 5 or lower and a second solvent; and
the third component comprising a reducing agent present in an amount less than 50 ppm (w/w of solution) and a third solvent,
wherein upon combining the first component, the second component, and the third component, more than 1 ppm (w/w of solution) of chlorine dioxide forms within five minutes.

72. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the first, second, or third solvent is water.

73. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the activator is an acid.

74. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the activator is phosphoric acid.

75. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the chlorite is an alkali metal chlorite.

76. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the chlorite is sodium chlorite.

77. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the reducing agent is also antimicrobial in nature.

78. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 77 wherein the reducing agent is an iodide salt.

79. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 78 including a stabilizing agent.

80. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 79 wherein the stabilizing agent is ascorbic acid.

81. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the pH of the second component is below 3.

82. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 wherein the molar ratio of the chlorite to reducing agent is less than 50 to 1.

83. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 85 wherein the molar ratio of the chlorite to reducing agent is less than 25 to 1.

84. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 including a surfactant in effective amounts to sanitize and clean a surface or system simultaneously.

85. (New) The multi component chlorine dioxide producing sanitizing and disinfecting system of claim 71 including a surfactant with biocidal attributes in effective amounts to sanitize and clean a surface or system simultaneously.